



<b>Form 1449 (Modified)</b>  <b>Information Disclosure Statement By Applicant</b>  (Use Several Sheets if Necessary)	<b>Atty Docket No.:</b> IMM1P034A	<b>Application No.:</b> 09/734,953
	<b>Applicant:</b> Schena et al.	
	<b>Filing Date:</b> 12/11/00	<b>Group:</b> 2672

**U.S. Patent Documents**

Examiner Initial		Patent No.	Date	Patentee	Class	Sub- Class	Filing Date	
JB	*	3,919,691	11/11/75	Noll	340	172.5	5/26/71	
	*	4,148,014	4/3/79	Burson	340	709	4/6/77	Techn
	*	4,385,836	5/31/83	Scmitt	356	374	2/2/81	
	*	4,398,889	8/16/83	Lam et al.	434	45	6/8/81	
	*	4,477,043	10/16/84	Repperger	244	223	12/15/82	
	*	4,546,347	10/8/85	Kirsch	340	710	6/24/83	
	*	4,654,648	3/31/87	Herrington et al.	340	710	12/17/84	
	*	4,678,908	7/7/87	LaPlante	250	231SE	12/5/84	
	*	4,680,466	7/14/87	Kuwahara et al.	250	231	4/19/85	
	*	4,734,685	3/29/88	Watanabe	340	710	7/18/84	
	*	4,775,289	10/4/88	Kazerooni	414	735	9/25/87	
	*	4,776,701	10/11/88	Pettigrew	356	356	5/20/85	
	*	4,782,327	11/1/88	Kley et al.	340	365	1/2/85	
	*	4,787,051	11/22/88	Olson	364	518	5/16/86	
	*	4,794,384	12/27/88	Jackson	340	710	4/9/87	
	*	4,795,901	1/3/89	Kitazawa	250	231	5/19/87	
	*	4,798,919	1/17/89	Miessler et al.	178	18	3/11/88	
	*	4,799,055	1/17/89	Nestler et al.	340	710	4/26/84	
	*	4,800,721	1/31/89	Cemenska et al.	60	393	2/13/87	
	*	4,811,608	3/14/89	Hilton	73	862.04	11/6/86	
	*	4,823,634	4/25/89	Culver	74	471	11/3/87	
	*	4,839,838	6/13/89	LaBiche et al.	364	709.11	3/30/87	
	*	4,861,269	8/29/89	Meenen, Jr.	434	45	3/30/88	
	*	4,868,549	9/19/89	Affinito et al.	340	710	5/18/87	
	*	4,879,556	11/7/89	Duimel	341	20	10/26/87	
	*	4,935,728	6/19/90	Kley	340	709	11/20/87	
	*	4,961,138	10/20/90	Gorniak	364	200	10/2/89	
	*	4,961,267	10/9/90	Herzog	33	503	11/23/88	
*	4,983,786	1/8/91	Stevens David et al	178	18	1/17/90		
*	5,006,703	4/9/91	Shikunami et al.	250	231	10/24/89		

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**U.S. Patent Documents**

Examiner Initial		Patent No.	Date	Patentee	Class	Sub- Class	Filing Date
JB	*	5,007,300	4/16/91	Siva	74	471 XY	1/22/90
	*	5,044,956	9/3/91	Behensky	434	45	1/12/89
	*	5,065,145	11/12/91	Purcell	340	706	10/6/89
	*	5,068,529	11/26/91	Ohno et al.	250	231	12/20/89
	*	5,095,303	3/10/92	Clark et al.	340	710	3/27/90
	*	5,103,404	4/7/92	McIntosh	318	568.22	12/20/89
	*	5,107,080	4/21/92	Rosen	200	6	12/1/89
	*	5,107,262	4/21/92	Cadoz et al.	341	22	10/12/89
	*	5,116,051	5/26/92	Moncrief et al.	273	448 B	6/8/90
	*	5,139,261	8/18/92	Openiano	273	148 B	9/18/91
	*	5,142,931	9/1/92	Menahem	74	471	2/14/91
	*	5,143,505	9/1/92	Burdea et al.	414	5	2/26/91
	*	5,146,566	9/8/92	Hollis, Jr. et al.	395	275	5/29/91
	*	5,181,181	1/19/93	Glynn	364	566	9/27/90
	*	5,184,319	2/2/93	Kramer	364	806	2/2/90
	*	5,185,561	2/9/93	Good et al.	318	432	7/23/91
	*	5,186,629	2/16/93	Rohen	434	114	8/22/91
	*	5,193,963	3/16/93	McAfee et al.	414	5	10/31/90
	*	5,220,260	6/15/93	Schuler	318	561	10/24/91
	*	5,223,776	6/29/93	Radke et al.	318	568.1	12/31/90
	*	5,228,356	7/20/93	Chuang	74	471	11/25/91
	*	5,229,836	7/20/93	Nagano	356	373	10/3/91
	*	5,254,919	10/19/93	Bridges et al.	318	560	3/22/91
	*	5,264,768	11/23/93	Gregory et al.	318	561	10/6/92
	*	5,296,846	3/22/94	Ledley	345	161	10/5/92
	*	5,296,871	3/22/94	Paley	345	163	7/27/92
	*	5,355,148	10/11/94	Anderson	345	166	1/14/93
	*	5,359,193	10/25/94	Nyui et al.	250	237	6/28/93
	*	5,374,942	12/20/94	Gilligan et al.	345	157	8/12/93
	*	5,379,663	1/10/95	Hara	74	471	11/22/93

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**U.S. Patent Documents**

Examiner Initial		Patent No.	Date	Patentee	Class	Sub- Class	Filing Date
JB	*	5,396,266	3/7/95	Brimhall	345	161	6/8/93
	*	5,398,044	3/14/95	Hill	345	145	6/8/93
	*	5,405,152	4/11/95	Katanics et al.	276	438	6/8/93
	*	5,414,337	5/9/95	Schuler	318	561	6/11/93
	*	5,429,140	7/4/95	Burdea et al.	128	774	6/4/93
	*	5,436,638	7/25/95	Bolas et al.	345	156	12/17/93
	*	5,436,640	7/25/95	Reeves	345	161	11/30/94
	*	5,451,924	9/19/95	Massimino et al.	340	407.1	1/14/93
	*	5,452,615	9/26/95	Hilton	73	862	7/22/93
	*	5,457,479	10/10/95	Cheng	345	163	6/13/94
	*	5,473,235	12/5/95	Lance et al.	318	561	12/21/93
	*	5,477,237	12/19/95	Parks	345	156	7/14/94
	*	5,491,477	2/13/96	Clark et al.	341	20	9/13/93
	*	5,512,919	4/30/96	Araki	345	156	3/30/93
	*	5,513,100	4/30/96	Parker et al.	364	167.01	6/10/93
	*	5,530,455	6/25/96	Gillick et al.	345	163	8/10/94
	*	5,570,111	10/29/96	Barrett et al.	345	157	10/3/94
	*	5,576,727	11/19/96	Rosenberg, et al.	345	179	6/5/95
	*	5,587,937	12/24/96	Massie et al.	364	578	04/25/95
	*	5,589,828	12/31/96	Armstrong	341	20	3/5/92
	*	5,589,854	12/31/96	Tsai	345	161	6/22/95
	*	5,591,924	1/7/97	Hilton	73	862.043	4/23/93
	*	5,604,345	2/18/97	Matsuura	250	237	11/16/95
	*	5,623,582	4/22/97	Rosenberg	395	99	7/14/94
	*	5,623,642	4/22/97	Katz et al.	395	500	4/6/94
	*	5,629,594	5/13/97	Jacobus et al.	318	568.11	10/16/95
	*	5,642,469	6/24/97	Hannaford et al.	395	99	11/3/94
	*	5,643,087	7/1/97	Marcus et al.	463	38	7/29/94
	*	5,656,901	8/12/97	Kurita	318	436	4/21/95
	*	5,666,138	9/9/97	Culver	345	161	11/22/94

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**U.S. Patent Documents**

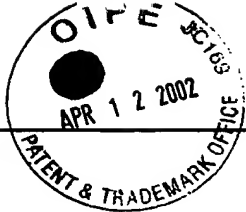
Examiner Initial		Patent No.	Date	Patentee	Class	Sub- Class	Filing Date	
JB A	*	5,666,473	9/9/97	Wallace	345	420	10/8/92	
	*	5,691,898	11/25/97	Rosenberg et al.	364	190	3/28/96	
	*	5,694,153	12/2/97	Aoyagi et al.	345	161	7/31/95	
	*	5,709,219	1/20/98	Chen et.al.	128	782	8/1/96	
	*	5,714,978	2/3/98	Yamanaka et al.	345	157	12/5/95	
	*	5,721,566	2/24/98	Rosenberg et al.	345	161	6/9/95	
	*	5,724,068	3/3/98	Sanchez et al.	345	161	9/7/95	
	*	5,731,804	03/24/98	Rosenberg	345	156	01/18/95	
	*	5,734,373	3/31/98	Rosenberg et al.	345	161	12/1/95	
	*	5,736,978	4/7/98	Hasser et al.	345	173	5/26/95	
	*	5,742,278	4/21/98	Chen et al.	345	156	11/1/95	
	*	5,754,023	5/19/98	Roston et al.	318	561	10/22/96	
	*	5,755,577	5/26/98	Gillio	434	262	7/11/96	
	*	5,763,874	6/9/98	Luciano et al.	250	231	2/29/96	
	*	5,767,839	6/16/98	Rosenberg	345	161	3/3/95	
	*	5,769,640	6/23/98	Jacobus et al.	434	262	8/10/95	
	*	5,771,037	6/23/98	Jackson	345	157	7/24/95	
	*	5,781,172	7/14/98	Engel et al.	345	164	6/16/97	
	*	5,790,108	8/4/98	Salcudean et al.	345	184	10/23/92	
	*	5,805,140	9/8/98	Rosenberg et al.	345	161	11/17/95	
	*	5,825,308	10/20/98	Rosenberg	341	20	11/26/96	
	*	5,828,197	10/27/98	Martin et al.	318	567	10/25/96	
	*	5,841,133	11/24/98	Omi	250	231	10/27/97	
	*	5,844,392	12/1/98	Peurach et al.	318	568.17	5/21/97	
	*	5,844,673	12/1/98	Ivers	356	138	4/17/98	
	*	5,889,670	3/30/99	Schuler et al.	364	186	1/11/96	
	*	5,929,846	7/27/99	Rosenberg et al.	345	161	6/5/97	
	JB	*	5,990,869	11/23/99	Kubica et al.	345	163	2/19/97
	JB		4,549,173	10/22/85	Nakamura	340	726	9/2/82
JB		4,560,983	12/24/85	Williams	340	825	9/17/82	

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U.S. Patent Documents

Examiner Initial	Patent No.	Date	Patentee	Class	Sub- Class	Filing Date
JB	4,604,016	8/5/86	Joyce	414	7	8/3/83
JB	4,692,756	9/8/87	Clark	340	790	7/5/84
JB	4,706,294	11/10/87	Ouchida	381	109	6/10/86
JB	4,712,971	12/15/87	Fyler	414	744	2/13/85
JB	4,724,715	2/16/89	Culver	74	471	4/30/86
JB	4,949,119	8/14/90	Moncrief et al.	364	578	1/12/89
JB	4,962,448	10/9/90	DeMaio et al.	364	146	9/30/98
JB	4,983,901	1/8/91	Lehmer	318	685	4/21/89
JB	5,012,231	4/30/91	Felsenstein	340-	709	12/20/88
JB	5,107,719	4/28/92	Kota	74	479	8/28/90
JB	5,116,180	5/26/92	Fung et al.	414	5	5/3/90
JB	5,195,179	3/16/93	Tokunaga	395	161	5/21/90
JB	5,280,276	1/18/94	Kwok	345	167	7/10/92
JB	5,293,158	3/8/94	Soma	345	161	5/5/92
JB	5,298,890	3/29/94	Kanamaru et al.	345	157	4/10/91
JB	5,381,080	1/10/95	Schnell et al.	318	566	2/18/93
JB	5,397,865	3/14/95	Park	178	18	11/15/93
JB	5,471,571	11/28/95	Smith et al.	395	137	7/17/92
JB	5,541,379	7/30/96	Kim	200	566	1/18/95
JB	5,565,887	10/15/96	McCambridge et al.	345	145	6/29/94
JB	5,565,888	10/15/96	Selker	345	156	2/17/95
JB	5,691,747	11/25/97	Amano	345	167	12/19/94
JB	5,596,347	1/21/97	Robertson et al.	345	145	3/31/95
JB	5,712,725	1/27/98	Faltermeier et al.	359	392	1/11/96
JB	5,745,715	4/28/98	Pickover et al.	395	348	9/17/96
JB	5,757,358	5/26/98	Osga	345	156	6/5/95
JB	5,760,764	6/2/98	Martinelli	345	160	12/13/95
JB	5,771,037	6/23/98	Jackson	345	157	7/24/95
JB	5,784,052	7/21/98	Keyson	345	167	3/12/96
JB	5,786,818	7/28/98	Brewer et al.	345	339	12/19/96

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Examiner Initial	Patent No.	Date	Patentee	Class	Sub- Class	Filing Date
JB	5,802,353	9/1/98	Avila et al.	395	500	6/12/96
JB	5,808,601	9/15/98	Leah et al.	345	145	9/12/95
JB	5,808,603	9/15/98	Chen	345	157	2/6/97
JB	5,816,823	10/6/98	Naimark et al.	434	307	10/9/96
JB	5,821,921	10/13/98	Osborn et al.	345	157	8/9/96
JB	5,877,748	3/2/99	Redlich	345	163	11/20/95
JB	5,944,151	8/31/99	Jakobs et al.	188	267.1	7/9/96
JB	5,973,670	10/26/99	Barber et al.	345	157	12/31/96
JB	5,914,705	6/22/99	Johnson et al.	345	163	2/9/96
JB	5,956,016	9/21/99	Kuenzner et al.	345	156	3/19/97
JB	5,956,484	9/21/99	Rosenberg et al.	395	200	8/1/96
JB	5,959,613	9/28/99	Rosenberg et al.	345	161	11/13/96
JB	5,973,689	10/26/99	Gallery	345	339	10/29/97
JB	6,001,014	12/14/99	Ogata et al.	463	37	9/30/97
JB	6,004,134	12/21/99	Marcus et al.	434	45	5/19/94
JB	6,020,876	2/1/00	Rosenberg et al.	345	157	4/14/97
JB	6,028,593	2/22/00	Rosenberg et al.	345	156	6/14/96
JB	6,061,004	5/9/00	Rosenberg	341	20	5/29/98
JB	6,078,308	6/20/00	Rosenberg et al.	345	145	6/18/97
JB	6,088,019	7/11/00	Rosenberg	345	156	6/23/98
JB	6,100,874	8/8/00	Schena et al.	345	157	6/24/97
JB	6,125,385	9/26/00	Wies et al.	709	203	9/22/99
JB	6,128,006	10/3/00	Rosenberg et al.	345	163	3/26/98
JB	6,154,201	11/28/00	Levin et al.	345	184	10/26/98
JB	6,161,126	12/12/00	Wies et al.	709	203	2/2/99
JB	6,166,723	12/26/00	Schena et al.	345	184	11/7/97
JB	6,191,774	2/20/01	Schena et al.	345	163	9/22/99
JB	6,201,524	3/13/01	Aizawa	345	123	11/24/98
JB	6,219,032	4/17/01	Rosenberg et al.	345	157	12/13/95
JB	6,232,891	5/15/01	Rosenberg	341	20	9/24/98

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**Application No.:**  
09/734,953

**Applicant:**

Schena et al.

**Filing Date:**

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**Group:**

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### Foreign Patent or Published Foreign Patent Application

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**Examiner:**

Dr. My A. Brin

**Date Considered:**

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**Other Documents**

Examiner Initial	Author, Title, Date, Place (e.g. Journal) of Publication
JB	* Adachi, Y. et al., "Sensory Evaluation of Virtual Haptic Push-Buttons," Technical Research Center, Suzuki Motor Corp., 1994.
JB	* Adelstein, B. et al., "Design and Implementation of a Force Reflecting Manipulandum for Manual Control Research," NASA Ames Research Center, MIT, 1992, pp. 1-24.
JB	* Adelstein, B., "A High Performance Two Degree-of-Freedom Kinesthetic Interface," Mass. Inst. of Technology, 1992, pp. 108-112.
JB	* Akamatsu, M. et al., "Multimodal Mouse: A Mouse-Type Device with Tactile and Force Display," Presence, Vol. 3, No. 1, 1994, pp. 73-80.
JB	* Atkinson, William D. et al, "Computing with Feeling," Comput. & Graphics, Vol. 2, No. 2-E, pp. 97-103.
JB	* Batter, J. et al., "Grope-1: A Computer Display to the Sense of Feel," Proc. IFIP Congress, 1971, pp. 759-763.
JB	* Brooks Jr., F. et al., "Project Grope—Haptic Displays for Scientific Visualization," Computer Graphics, Vol. 24, No. 4, 1990, pp. 177-185.
JB	* Buttolo, P. et al., "Pen Based Force Display for Precision Manipulation in Virtual Environments," IEEE 0-8186-7084-3, 1995, pp. 217-224.
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<b>Examiner:</b> <i>J. A. Briss</i>	<b>Date Considered:</b> <i>6/6/02</i>
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<b>Form 1449 (Modified)</b>  <b>Information Disclosure Statement By Applicant</b>  (Use Several Sheets if Necessary)	<b>Atty Docket No.:</b> IMM1P034A	<b>Application No.:</b> 09/734,953
	<b>Applicant:</b> Schena et al.	
	<b>Filing Date:</b> 12/11/00	<b>Group:</b> 2672

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**Other Documents**

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